JACG NEWSLETTER

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THE JERSEY ATARI COMPUTER GROUP

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From the Editor's Desk...

Vacations are great. Great while they're happening but even more enjoyable in retrospect. We just got back from two weeks in Florida (not by choice in July) and I reflected on how much of our time was in some way affected by computers.

We had three experiences which pointed up how much our everyday lives are being influenced by the thinking machine. A trip through Epcot's Communicore exhibit takes you backstage into the actual computer center which controls the day-to-day operations of the Vacation Kingdom. You get a chance to see only a few people controlling all of the shows, power distribution, HVAC, and security. It's very impressive. The bulk of my time was spent attending classes at Nova University, heading for a doctorate in computer education. With JACG membership heavily Bell Labs/AT&T people it is interesting to note that this program has elected Unix as its operating system. The microcomputer labs are equipped with IBMs, AT&Ts, Apples, and (yea!) Ataris. Right on, Nova.

The highlight of the trip came on July 29th when we were lucky enough to garner a gate pass for the launch of the Challlenger space shuttle. The "bad software upload" delay and the seemingly interminable wait were quickly forgotten during the incandescent liftoff and downrange tracking.

The point of this report is not to tell you "how I spent my summer." These experiences simply reinforce my conviction that the real power and promise of the computer, in all its forms, has barely been seen. Our favorite toy is making inroads which ultimately will make life richer for all of us. When someone asks me what I do with computer I no longer stammer in technicalese. I tell them that, like my car, I drive around in it seeing things I didn't dream existed, experiencing things that were yesterday impossible, and all the time growing and learning. I invite them to join me in the journey, if they will. Isn't it nice to already be on board?

Frank Pazel

Frank Pazel
Editor-in-Chief, JACG Newsletter

In This Issue

MARK YOUR CALENDARS!!

JACG Meeting Schedule

September 14, 1985
October 12, 1985
November 9, 1985
December 14, 1985

From The Conn.....

Summer, typically a slow time for the computer industry. Well, by the time you read this, things will have heated up considerably. And I don't just mean as a result of the dog days of August.

What's hot?, you ask. Just the announcement/availability of two of the most exciting computers ever introduced to the American market! Yes, the Comodore Amiga and the Atari ST. The Atari 520ST computer began shipping in mid-July and offers a MacIntosh-like interface, plus color, plus MIDI ports, plus standard serial and parallel ports, plus a DMA (direct memory access) port, all for one-third the price of the equivalent Apple machine. I know this is no news to true Atari fans but the important point is that the STs have been shipped and are in the stores. For Jack Tramiel and company to get this accomplished in less than a year from the date that they bought the company, is truly amazing.

The Amiga and Atari ST are similar in some ways: they both use the 68000 chip, they both have mouse-controlled windowing environments), both use 3-1/2 inch floppy disks. Many people have called the Amiga the next-generation Atari, since Jay Minor (who designed some of the original Atari chip set) was also involved in the chip set design of the Amiga, and the design philosophies of the machines are similar.

Here are the basic specs of the Amiga: 68000 processor running at 8 MHz. It will come with 256K of memory, and can be expanded to 512K internally although the operating system can handle up to 8 MEGABYTES of continguous memory. Unlike the ST there is no provision for cartridge ROM. However, the built-in drive can store approximately 880K compared to the Atari drive which can hold only 364K.

Like the ST, a REAL keyboard is provided so YOU DON'T HAVE TO USE THE MOUSE. The cursor control keys will move the mouse pointer, and all mouse functions can be accomplished from the KEYBOARD. As far as ports, there are standard serial and parallel ports and any kind of monitor availble--analog RGB, digital RGB, compositie, or even a TV set can be used. Unlike the Atari ST, there are video and audio IN ports. The video IN allows you to take a composite signal (say from your VCR or video camera) and display it with computer graphics overlaid on the screen!!!! Likewise, audio in will let you operate on an outside audio source. Both supposedly can be used to digitize outside signals (audio and video), though some additional hardware may be necessary.with other computers).

The screen has several resolutions, from 640x400 in 2 color mode to 320x200 with 32 colors and a choice of 32 colors for each individual pixel). Colors are selected from a pallatte of 4096 possible colors. You are by no means restricted to one graphic mode at a time--in fact, you could even have windows with different graphics modes sitting next to each other! The Amiga has 4 sprites with 16 colrs per sprite or 8 with 8 colors. They are 16 bits wide, and as tall as the screen. On the Amiga, practically every graphics feature that you can think of is part of the Operating System, so that the commands can be called by any program (this should be familiar to Atari owners).

The Amiga has 4-voice stereo sound (2 voices on the left channel, 2 on the right channel) and each voice is polyphonic, so that you can play a whole chord with a voice. The Amiga also has a voice synthesizer built in, that speaks with a male OR a female voice.

The Commodore Amiga is said to cost about $1500, but it may be as much as $2000 with an RGB monitor.

The Atari ST and Commodore Amiga are two fantastic computers. Are they going to compete head-to-head? Contrary to what the industry press is saying, I don't really think they are direct competitors. In general, the Amiga is a $2000 computer and the ST is a $1000 computer. The Amiga is a technically stronger machine than the ST but they are aimed at two completely different markets. The ST is geared to the home user while the Amiga is aimed at the professional graphics person, small business or advanced hobbyist.

I think a more important question is, will these machins sell? The personal computer market is very soft and it may turn out that computers are a seasonal product. Maybe all of the people who want a computer have already bought them. And don't forget, there is still an awful lot you can do with an 8-bit computer like an Atari XL or XE, the overpriced Apple II or the hard to use Commodore 64.

Personally I hope both computers become successful because that will make a better market from which consumers can choose. If either or both computers fail to sell in big numbers, then the entire industry had better watch out. Personal computers may turn out to be just a fad after all.

Arthur Leyenberger
President, Jersey Atari Computer Group

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The Missing Links

by William Brandt - JACG

Microcomputers have made remarkable advances over the past few years; however, in order for the home computer to continue to evolve, additional work is needed to develop the "missing links". The "missing links" are the hardware and software components that will allow the computer to send and receive information to and from other devices. These links will probably provide the breakthroughs that will enable many useful applications to be developed, and they in turn could supply the reasons why every home will "need" a computer.

The "missing links" include hardware components such as sensing elements (for instance, thermocouples and sound detectors), motor controllers, and on/off switching devices. Even more important will be the software components to utilize the input/output signals and make the systems easy to use. These types of links are already widely used in industry. For example, in the chemical and petroleum industries temperature, pressure, flow, and level instruments are used with mainframe or large minicomputer programs to control the production of chemical and petroleum products. Another example is the increasing use of industrial robots for the assembly of automobiles. The technology for links is already here. What is needed now is to make it available for use with computers in the home.

Atari has already started in this direction with their temperature and light lab kits. In the temperature lab a thermocouple transmits a signal through the lab interface to the computer. The signal eventually ends up as part of a temperature graphics display on the screen. As good as the lab series is, it represents only a tiny fraction of the possibilities for links and applications. Consider, for example, some of the following examples which could be developed:

<u>Automobile Diagnostics</u>. Sensing elements connected to your car's exhaust and electrical systems could be combined with software to provide a diagnostic tool to analyze what is wrong with your car's engine.

<u>Personal Fitness</u>. Sensing elements for your pulse and blood presure could be combined with software to help you evaluate the effectiveness of aerobic type exercises.

<u>Gardening</u>. Sensing elements for the moisture and pH content of your soil could be combined with software to help recommend what plants would grow best, or how to modify the soil to help you grow the plants you want.

<u>Entertainment</u>. Voice recognition, media controls, and software could be combined to let you select a music or television program simply by asking for it.

<u>Intelligent Phone Answering</u>. Voice recognition could be combined with software to allow you to have individualized messages for expected callers on your telephone answering system.

Another area for creating links is in the area of robotics. The potential here is almost unlimited but is probably further off on the horizon. Although we may be a long way from seeing the development of a really sophisticated robot for the home, there is no reason why we could not use some of the basic principles today. For a starter, a simple robot arm kit, with the software to operate it, would allow students and computer enthusiasts to improve their awareness of robotics and perhaps contribute toward the development of more complex devices.

How soon it will be until the "missing links" are discovered, or how soon they will be made available as consumer products, is difficult to say. I for one hope it will be in the near future. My car is acting up again, I need to start exercising more, and I could really use some help with my garden.

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<u>Links Proposal</u>

Although I currently know very little about robotics, I would like to volunteer to organize a special interest group on robotics. The initial goal would be to have about 4 to 10 people get together about once a month to talk about using the Atari computers for robotics, and to develop a "starter kit" for JACG members. The "starter kit" would identify the hardware to buy (perhaps something as simple as the current "Robotics" construction kit in the toy stores), plus the software to use it (another disk for the JACG library). The end result would be a simple robot arm which would be controlled by the Atari computer through the keyboard, menu of actions, or some other easy to use method. If anyone is interested in doing this, please drop me a line (at 27 Mohawk Trail, Westfield, N.J. 07090) or call me (on 654-9387 after 7 p.m.). If enough people are interested, we could start meeting in Sepetember after the vacation season is over.

WANTED!!

ARTICLES FOR THE

J.A.C.G. NEWSLETTER

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GIVE A BIT THIS MONTH

PaperClip

A New Atari Word Processor
Reviewed by Richard Kushner -JACG

The arrival of PaperClip from Batteries Included was a masterful piece of public relations. Beginning five weeks before the arrival of the program, and continuing each week, a notice arrived in the mail that simply showed a picture of a paperclip and the words "Countdown - 5" (or 4, etc.). Countdown - 2 also contained one of the joystick port "keys" needed to run the program (the PaperClip protection scheme; make as many copies of the program as you want to, but you'll need the key to run them). Countdown - 1 included the folder the program would be delivered in. Finally, the program arrived. I eagerly opened the package, took a quick look at the manual (first impression - many powerful features, but also useable on a superficial level if desired; nice looking manual). I read their interesting blurb describing how they had entered PaperClip and an Atari computer in a word processing contest against some real heavyweight business programs running on expensive computer systems and had managed to achieve a pretty good score. Then they computed the score divided by the cost of the system and the Atari with PaperClip was far and away the most cost effective (in terms if contest points per dollar of computer + word processor cost). I was primed to be overwhelmed by PaperClip and to write a long column extolling its virtues and inviting everyone who reads this to join me in tossing all other word processors into the toilet.

One more digression and then I'll finally rip the curtain of suspense aside and present my experience with PaperClip. As many of you know, I consider word processing to be one of (if not the) most important functions that personal computers can serve. I try all word processors; I love word processors; I use word processors; I think everyone should have and use a good word processor. I say all of this to establish my credentials as a word processor reviewer; not that I needed to, but what follows is not pleasant. You might want to keep little children and animals from seeing the gruesome tale that follows. It doesn't make pleasant reading.

To begin with, this review is not being written with PaperClip! ("Oh-oh", you say. "Things already look ominous".) I found one absolutely terrible problem and, in addition, my attempts to save my initial typing attempts with PaperClip somehow managed to get sent to never-never land, without passing GO or being saved on a disk. This last part was undoubtedly my fault, since I set out to use PaperClip without looking at the manual in any detail. I know that this is not a fair way to explore the "power" features of this program, but I wanted to be the naive writer and see how much I could discover by just sitting down and typing. I fully expected to need to use special key sequences to activate the more heavy-duty features, but I was willing to postpone that part until I got some feel for the program first. (By the way, I now know how to correctly save text!)

The first thing I noticed was that PaperClip uses a different character set than the standard Atari font. The new set is easily readable, no problem there. Across the top of the screen, I could see a line that had information about how many lines I had typed, something called "Paste:" (a peek at the manual said that this related to the paste buffer), and the column and line that the cursor currently resided in. So far, so good. Typing merrily away, I then discovered that the end of each typed line was marked with a diamond-shaped symbol and that if you hit the RETURN key (as if to end a paragraph), you were greeted with a left curving arrow (containing two right-angle bends) signifying a carriage return. Fine and dandy.

Then disaster struck! I began to notice that the beginning of each screen line seemed to be missing one character. The hair on the back of my neck began to stand up; what sort of demon was at work here? I typed more and continued to see this problem. I watched the program performance carefully and concluded that something was seriously wrong. It seems that PaperClip looks at the line you are currently typing in order to decide where to break and move words to the next line (called "word wrap"). It scrolls the current line to the left as it checks to see what will fit on a line and in the time needed to reformat that line and move the appropriate end portions to the next line - the program loses one character. Even if I slowed down my typing this continued to happen. This is intolerable! This is totally unacceptable! I refuse to go back and edit every single line of text to find and fix those missing characters.

Now journalistic integrity rears its head. Do I continue past this problem and describe the many features that Paper Clip does have - all those power features that earned it those points in that competition? Do I extol the virtues of a word processor that can switch pairs of letters around (correcting one of the most common typing errors)? Do I describe the use of "macros", a real power feature available in no other Atari word processor,

which permits single keystrokes to substitute for words, phrases and commands? In all honesty, I can't brush aside the real problem I have encountered. I will check the manual to see if I have done something really stupid and I will call Batteries Included to get their comments on this big problem with PaperClip. In the meantime, this review must end. PaperClip (Version 1.0) has a serious problem that must be fixed before this word processor can be taken seriously.

I have seen other reviews of PaperClip and, with one exception, they list and praise all the features that are in this program with no mention of problems using the program. I am forced to conclude that the writers either tried the program and never encounted the problem I have described above, or else (horror of horrors) they wrote their reviews by reading the manual without ever really trying out the program. Atari User Group newsletters do their members and the entire Atari community a diservice when they fail to fully evaluate any product being reviewed.

I have now had a conversation with Batteries Included, during which I spoke with their Atari expert and a marketing person. (Another slight digression - why do companies have technical support phone numbers that are not "800" numbers? Why should I have to pay a long distance charge to inquire about problems in their product?) BI is aware of the problem I have outlined above as well as a few others and some typos and mistakes in their manual. They have a revision of the disk ready and a revised manual in preparation. However, their current policy is to charge $10 (mailing and handling charge) for the replacement disk. I pointed out that this was a big public relations mistake, since Version 1.0 should not have been released with such a big flaw. It's one thing to pay for an upgraded product with new features. It is another to be charged to replace a flawed product with one that works the way it should have worked in the first place. They said they would get back to me with the final word on this topic.

In the meantime? I suggest you wait until we test the corrected PaperClip before you rush out and buy one. There is great potential in this product. It could be the best Atari word processor in terms of advanced features. I will pick up this topic again when the new version arrives.

HAVE YOU RENEWED YOUR MEMBERSHIP?

CHECK YOUR MAILING LABEL
FOR MEMBERSHIP EXPIRATION DATE

PAY ATTENTION!

IT'S TIME TO GIVE A BIT

TRADING POST

Trading Post is a service for JACG members who wish to sell or swap items of any type. There is no charge for this service. Material must reach the Editor by the 20th of the month to be considered for inclusion in the following month's Trading Post. No commercial services or items will be accepted.

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FOR SALE: KAYPRO 10 portable CPM computer with 10 megabyte hard disk drive. All original software includes Wordstar, dBase II, Turbo Pascal, T/Maker III, CPM 86, dBase utilities (d-Util, Quick Code, dGraph), Abstat, Supercalc, too many others to list. $2300. Call Art Leyenberger at (201) 887-2861.

SOCRATES TEACHES FORTH

by Donald Forbes - JACG

Did you ever hanker for a Forth guide to self-paced learning? Did you ever wish for a book that would devote eighty percent of the space to the twenty percent of the Forth that you use eighty percent of the time? If you did, then here it is.

This review appeared in the March issue of Forth Dimensions in the column entitled 'Ask the Doctor' by William F. Ragsdale of Hayward CA (and the Society of American Magicians) who has done more than any one man to popularize Forth:

A book specifically intended for self-paced learning has been published...the new book 'Learning Forth' by Margaret A. Armstrong with technical assistance from Dr. Mitchell E. Timin published in 1985 by John Wiley (226 pages, $17).

The material is organized into eleven chapters, five appendices and an index, organized as follows: (1) why you should program, motivation, (2) Forth history, (3) start-up, (4) stack use, number representation, (5) defining new words, (6) style and structure, (7) editor, (8) conditions and Boolean variables, (9) data structures, and (10) interactive examples.

The foreword states states the author's purpose to develop student competency with '...a basic working knowledge of Forth...' and '...to be ready to move on to intermediate level programming in Forth.' In summary, Armstrong accomplishes her goal with satisfying directness.

The Socratic style of mixing questions, answers and new material offers the reader a structured approach without being repetitive. Each concept is presented in a brief paragraph, with several one-line questions. Thus, 90% of the book presents 'frames of knowledge' with requests for reader involvement. In fact, since test, questions and answers alternate, the book would be quite hard to read in narrative fashion. Each chapter concludes with several summary questions.

A suggestion is in order. You will lose much of the 'dialog' format of the book if you read ahead to the answer before truly thinking through each question. Try using a 3x5 card to cover the answers until you have had a chance to formulate your own. It's fine to look back at the test, just resist any temptation to read the answers! Even better, write down the answers. This is involving, and will later reveal your true progress and understanding.

The first chapter succeeds at engaging the reader with discussion of the benefits of programming, as well as presenting products from a number of vendors. A brief history of Charles Moore's work sets the stage for the later technical material.

A few inaccuracies about the early origins of Forth and FIG are to be found, indicating the author worked from published sources rather than from first-hand research. These do not detract from the appropriateness of historical perspective.

The topic of text entry to disk is treated in a functional way rather than in a technical way. The reader learns how to list and load from disk, but must get the specifics of editing from his system documentation. This is out of consideration for the reader, since subtle differences are found in editors purported to be identical. Keen insight or good fortune also caused the author to omit other elements of Forth usage that have variations in usage or subtlety in application. Words such as BLOCK, VOCABULARY and DOES> are thankfully absent, as they can intrude on the initial development of competency.

Many of the examples build to a major project. Chapter Eleven calls on these components when presenting the example of a simple computerized payroll. All the components of a 'real' application are present, although offered in a limited way. We see data structures, prompted input, calculation and a report. This is the first time in print for a coordinated use of such elements to teach Forth. An appendix also gives twenty-four blocks of short application examples.

Systems other than Forth-79 or fig-FORTH will have trouble with the examples using BL, WORD, QUERY ad SP@. However, such dependencies are far fewer than in other texts.

At first glance, this book is similar to many other books on Forth. But, looking deeper, we see a instance of the 80-20 Pareto principle. Other books spend only twenty percent of their space on the twenty percent of Forth that is the core of usage. The remaining eighty percent is spent on completeness, details and side effects.

Armstrong turns around the ratio. She spends eighty percent of the book on the twenty percent of Forth you use eighty percent of the time. Some of the stack manipulation examples are lengthy; the time you devote to this material will be well spent if you truly master it.

All topics are presented at the same level of emphasis. This tends to mask some items of great importance. For example, on page twenty-five, the text interpreter is explained in five lines. The explanation given is not rigorous, and is buried without a caption as the fifteenth point in the chapter.

This points out a subtle risk to the reader. Since information is presented in small bites, one may jump over and skip ahead. The risk is that impatient students will succumb to the temptation to skip ahead. Still, encapsulation of information is essential to the learning process, even if the technique is not appreciated by the student. It has been stated that 'you can only learn what you almost know.' The building-block approach is used here; but without an instructor present, the burden of pacing is relegated to the student.

Some fundamentals need to be stated clearly the same way every time. There is some confusion between a 'word' and a 'word definition.' Also, no references are cited in this work. And Armstrong's book would have benefitted from a clearer correlation with publications such as the Forth-79 and Forth-83 Standards.

Important methods of top-down design, natural-language problem statement and successive refinement are brought in play quite early (beginning on page three, to be exact).

But no help is offered on screen editing style. There is not even a sample screen in the body of the book, although there are many in Appendix A. This problem is brought home on page 121, where a single definition is thirty-three lines long. On page 124, insult is added to this injury when the same example is expanded to forty-eight lines! This would have ben a great place to discuss factoring and modularization.

Only one place in the book offers mystification to readers. The fig-FORTH and Forth-79 EXPECT will leave one or two nulls at the end of input text. This is mentioned in the book's glossary. Several examples use VARIABLE and ALLOT to leave space for text and numbers. It is a side effect of combined use that two extra bytes are allocated. This space nicely allows for the nulls, but no mention is made of such a need. If a student chose to conserve the space, a system crash would be likely. A more general technique would be to allot a scratch space, clear it to blanks, then EXPECT and CMOVE the desired characters to the storage areas.

No mention is made of the Forth dialect used in the examples. The glossary is fig-FORTH, and it appears that all the examples will work in fig-FORTH and Forth-79. Five words are used which are not in Forth-83, but they may be provided in extensions by specific vendors (VLIST, BL, QUERY, SP@ and SP!). It is a shame that simple overlays were not given, so that users of most distributed systems could make immediate use of this book. The terminology is quite up to date. Although the dialect appears to be fig-FORTH, the effects of Forth-79 and Forth-83 show in the text. Terms such as 'text interpreter' are used, rather than the dated 'outer interpreter.' Thus, readers will be learning contemporary expression.

The author does have the abominable habit of capitalizing the word Forth. This makes reading difficult, and continues the confusion between Forth as a proper noun (it is not an acronym), trademarks built on the name, and the word FORTH as the name of a vocabulary when in the dictionary.

Do not expect to use this book as a reference manual. English topic headings are at a premium and the index is minimal. Each major paragraph or subject is numbered, but no use of the numbers is apparent. A keyword would have been more user-oriented. While chapters are logically laid out, you will generally have to search linearly within a chapter to return to a specific subject.

The material on each topic is clear, usable and understandable. No attempt is made to be comprehensive or to discuss side effects. As a result, the material should be transportable to a variety of Forth systems. For example, LEAVE is not discussed during consideration of DO and LOOP. This is probably better left for other works, as compatibility problems and side effects are likely. In a similar fashion, discussion of the use of the disk for other than storage of programs is left alone.

Your good doctor is aware of no other Forth book which is offered solely as a learning experience. Other authors have written books from which they wish one to learn, but here is the first chance for you to participate completely in such an activity. Congratulations are in order for Margaret Armstrong for producing 'Learning Forth.'

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JACG Membership
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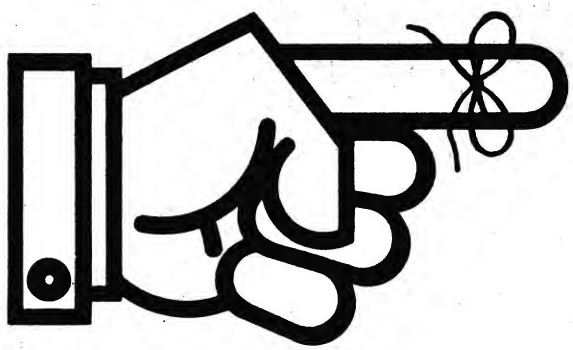
The Jersey Atari Computer Group (JACG) invites you to become a member. Dues are $20.00 per year and entitle the member to: 1) Receive the monthly newsletter; 2) Purchase programs from the group's extensive tape and disk libraries at special rates; 3) Join special interest groups or form new ones; 4) Benefit from the expertise and experience of other Atari computer users; 5) Participate in group purchases of software at substantially reduced prices; 6) Receive a membership card that entites the member todiscounts at local computer stores; 7) Attend monthly meetings to learn about the latest hardware and software, rumors, and techniques for getting the most out of your Atari computer; 8) Submit articles and programs to the newsletter and give demos and presentations at the monthly meetings; 9) Participate in sale/swap activities with other members; 10) Access the JACG nationally famous Bulletin Board; and 11) Have a lot of fun.

If all of this sounds good to you send a check or money order, payable to JACG, to:

Ron Kordos
201 Lake Valley Road
Morristown, NJ 07960

Remember, receiving the JACG Newsletter is just one of the many benefits of being a member of JACG.

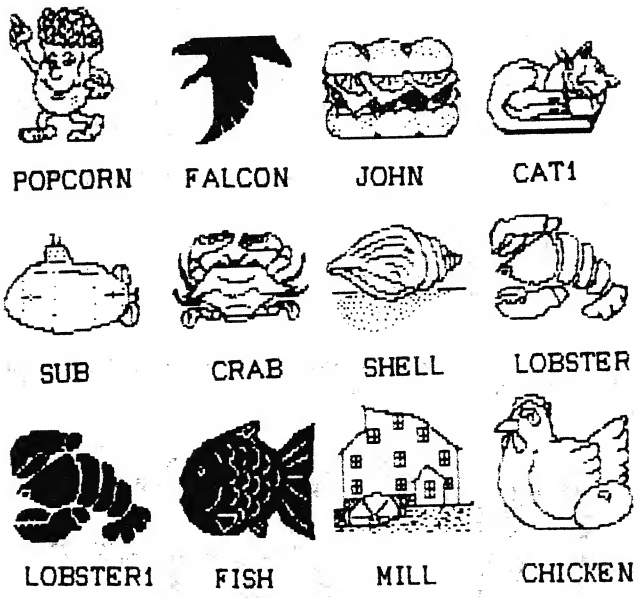


DON'T FORGET!
Contribute an article this month.

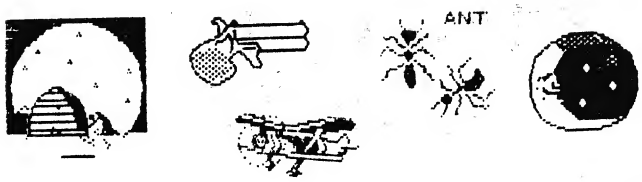
NEW!!! GRAPHICS FOR PRINT SHOP

by Frank Pazel - JACG

The Jersey Atari Computer Society, based in Cherry Hill, has come up with a really great idea. Knowing full well the creativity of Atari users they have instigated a national campaign to collect original art work produced for use with the Print Shop. Using the graphic editor allows the creation of pictures which can be saved as files for use with the PS. I recreated the JACG logo and title for this article in about half an hour. Our own Tony Pellechio (JACG artiste laureate) has sent me a disk with twelve of his original drawings. Take a good look at them and be inspired to try your hand at this exciting activity.



Here are some pictures from the JACS collection:



Below is the evolution of an Atari jack- o-lantern which took me about an hour to do using a joystick:

Here's the drill. We will collect your files through August 20th. The files will then be consolidated and sent to the JACS who will screen them, pick the very best, produce a data disk (I bet they end up with enough to produce several disks), print documentation, and return a copy to JACG for addition to our club library. Since these pictures are being donated they will be considered public domain but each user group will essentially be reproducing the disk as a fund raiser.

Don't you think that's a great idea? Everyone will benefit from this project, even Broderbund who can't help but sell more of its Print Shop packages.

Since the graphic editor allows you to use input from a joystick, keyboard, Koala Pad, or Atari Touch Tablet you could have a ball making up artwork. For those of us not that creative (and willing to cheat a little) get a kid's coloring book, reduce the pictures down to fit either touch tablet, and trace it into the PS. No matter how you do it....DO IT!

Send your files to JACG Newsletter editor Frank Pazel, 14 Whitman Drive, Denville, NJ 07834. Disks should be marked with your name and the exact names of the files. Disks will be returned to you at the next meeting or mailed if instructions are included.

Be Creative!
Do It Soon!
This Is Your Chance
For Immortality!

Graphics Editor
Graph Paper
Page 22

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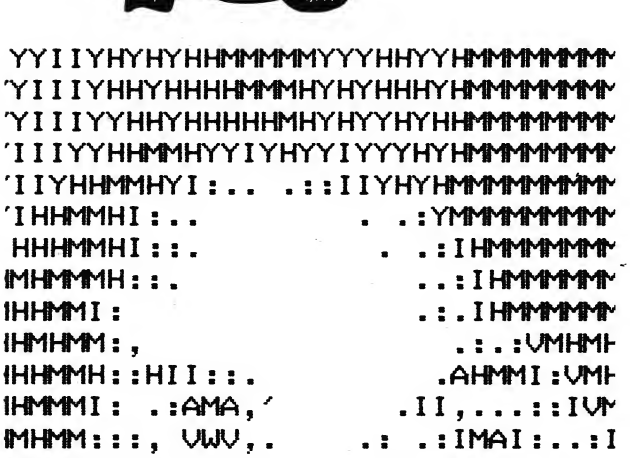
JACG HOTLINE 884-1642

GET THE LATEST NEWS ON THE WORLD OF ATARI

Atariwriter Pinup

No, this is not just another digitized picture of a pretty young thing. How or why someone undertook the prodigious task of typing into Atariwriter the keyboard symbols which produce the shapes and subtleties remains a mystery. Look closely, see how the halftones were produced. A section of the damsel's face in full size is reproduced so you can see the amount of work that went into this 73 sector file. Perhaps it was produced with a scanner and software. If you know the history of this work won't you share it with us?



IT'S ABOUT TIME...

THAT YOU WROTE AN ARTICLE FOR THE NEWSLETTER

Forth Guide Tutorial

by Donald Forbes - JACG

After two years of presenting weekly tutorials to beginners on MPV-FORTH, Dr. Glen B. Haydon decided to write a book he called 'FORTH GUIDE: An exploration of the intricacies of MVP-FORTH.' This version of Forth is in the public domain (avaiable from some bulletin boards) and Haydon (of Haydon Enterprises, Box 429 Route 2, La Honda CA 94020) announced that "the contents of this publication are released without restrictions; acknowledgement of its use would be appreciated."

The tutorial addresses all the questions that trouble newcomers to Forth. Differences in implementation should be easy enough to resolve.

Here is chapter one of Haydon's excellent $20 150-page book:

CHAPTER I

GETTING STARTED

The programming language, FORTH, harnesses the hardware to a simple group of functions. The major use of a computer is for text or data input and output. The older machines were used for number crunching but today that use is minimal on personal computers. The big number problems are run on main frames.

Start with some of the very simple FORTH functions. But first you must have a running system with MVP-FORTH to load. The file will usually be either FORTH.COM or FORTH+++.COM. We will presume you can run such a file from your operating system.

If you have your printer connected and wish to log a hard copy of your session, enter a control-P. To stop the logging, enter another control-P. This FORTH function toggles a flag. When the flag is set, the screen is echoed on the printer. A hard copy is particularly useful when starting. You have a record of what you did when something unexpected happens.

You cannot damage your hardware with FORTH. However, in moving rapidly and often without thinking, you can easily crash the system software. No problem! Just as when you stall your car, you simply restart it. Often you will never know exactly what you did. Usually, a software restart of the system will be enough, but sometimes it may be necessary to turn the power off and on again. That is just like on a V W car. You have to turn the ignition off then back on before you can rerun the starter.

For your feeling of security, you can leave FORTH any time with BYE <cr>. Note that the command must be entered in upper case. When entered in lower case you will be answered with the message: NOT RECOGNIZED. What is not recognized is indicated as part of the message. Try leaving FORTH. That wasn't so hard, was it?

When FORTH is first loaded, you will see on the display a header and a version number. Type a carriage return, <cr>. The response will be OK. The program is ready for you to enter any command you wish. The OK means that the system has finished whatever it previously was doing.

What functions can you use? There are about 150 common functions already defined and you can add to these as you wish by defining your own functions.

Type a series of carriage returns and you will see a column of OKs down the side of the screen. Yes, go on and try it. This is intended to be interactive. Finally, you are at the bottom of the screen and you may notice that the OKs scroll off the top.

After an OK, type: JUNK <cr> and the system responds NOT RECOGNIZED. Obviously, the system did not understand you. JUNK has not been defined. You have done no damage to the system. It just cannot do anything.

Well, what can you do? You have to learn the functions which are available. To start with, you will have about 150 functions to learn. You have already learned one, BYE. Try some more, such as

page <cr>.

The response again is: NOT RECOGNIZED. The problem is that by convention most FORTH words are in upper case. There is a long history to this. In olden times, most terminals could only produce upper case. For portability including old terminals, only upper case has been used. There is no reason that you cannot use lower case for your own definitions if you wish. But to get started, just set the capital lock key. Now try again

PAGE <cr>

Note that the screen is cleared and you will see the OK at the top left. It is not that difficult. If your system only produces a carriage return, check with your documentation to learn how to make it perform its correct function. Next suppose that you want to move down the page 4 rows before entering anything: CR CR CR CR <cr>

Every FORTH command must be separated by a space or a carriage return. The carriage return will also tell FORTH to interpret and execute all of the commands entered up to that point. Any other combination of characters and symbols may be used in making new commands. But try to use a mnemonic group of characters when you later define your own functions. Sometimes a long English word will have the best mnemonic value.

And the OK appears down 4 blank rows. It would be much easier to simply enter: 4 CRS <cr>. But this gives the message: NOT RECOGNIZED.

Now try a big step. No apology is made for this jump ahead at this point. If you do not understand, all you need to do is copy the example. Understanding will come later.

Define a function CRS which will move the cursor down any given number of rows. This is a function which will repeat the single CR function a given number of times.

: CRS 0 DO CR LOOP ; <cr>

Now try 4 CRS <cr>. This time the program understood you. You have added a function to the system. You will note that the added function can be used immediately. There is no edit, compile, load and run. This is interactive programming.

What did you do to define the function CRS? You will see more details of the process later, but you have enough here to use. The type of function is called a 'colon' definition. The definition begins with a colon!

Next you entered your name for the new function. The name can be any string up to 31 alphanumeric and symbol characters except

a space and a carriage return. The only reason the name you chose has any mnemonic value is that you selected it. You could just as well have typed:

: !@#$%^&* 0 DO CR LOOP ; <cr>

Try that and prove it to yourself. Then test it: 4 !@#$%^8* <cr>

Next in the colon definition you entered a zero, 0. The value is the beginning range for the DO ... LOOP structure. The way you will use the function is to first enter the number of rows you wish to skip. The value you entered will be one more than the other end of the range. But the range 0 through 3 has four values -- the desired number.

Inside the DO ... LOOP structure place the already defined functions you wish. In this case you placed CR within the loop. You wanted the single function, CR, to be repeated.

Finally, end the colon definition with a semicolon. As soon as you type the <cr>, the new definition is ready for use.

Again, what happens if you make a mistake entering the definition? First of all no real damage is done. You will be given a short message along with the location of the error. The definition will not be added to the dictionary of the system.

You cannot use a DO ... LOOP structure outside of a colon definition. If you try, you will have the system mark the DO and give you the message COMPILE ONLY. Another carriage return will return the usual OK prompt.

Sometimes the system will appear to go to sleep. Without restarting your program, a simple sequence of carriage returns often will get you back to the OK prompt. Who knows where the system went.

There is one exception to this rule--the message: NOT UNIQUE. This is not really an error. It means that the name you chose had been previously used for something else. All previous uses of the word will remain unchanged, but all subsequent uses will have the new function.

Now try to clear the screen and display the message HELLO, in the middle of the monitor. This will introduce the function of SPACES which is similar to the your new CRS, but has already been defined.

PAGE 12 CRS 37 SPACES

." HELLO" 12 CRS <cr>

You have just entered interactive instructions which will be interpreted and executed as soon as you enter the carriage return. You also used the ." ... " pair of instructions. Whatever appears between the ." and a terminating " will be printed on the terminal.

The steps of our interactive instructions are as follows: Clear the display and home cursor, move down 12 rows and in 37 spaces, type HELLO, and move down 12 more rows. Once you become familiar with FORTH, you find that the instructions are just as clear in FORTH.

Finally, make a function which will execute these instructions with a simple command. This is adding a new colon definition to your FORTH.

: HELLO PAGE 12 CRS 37 SPACES <cr>
." HELLO" 12 CRS ; <cr>

You can break up your definition into a couple of lines if necessary. Now test your definition.

HELLO

With these new tools, you can place any message you wish anywhere on the screen. Make up your own exercises. Choose names which are meaningful to you. When you are all done, you will have added several words to the vocabulary of functions available in your implementation of FORTH.

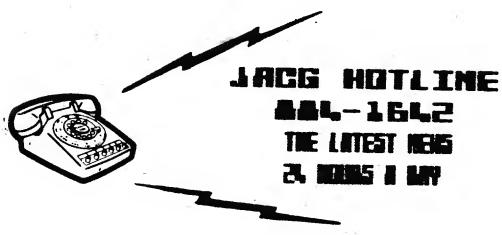
Perhaps you do not remember all the words which you have added. You can see the new words as well as all of the old ones with the command: VLIST <cr>. Hit any key to stop the scrolling. Then hit any again to continue the scrolling. While the scrolling is stopped, you can hit any key twice in rapid succession to leave the scrolling. Several MVP-FORTH functions which scroll data on the screen operate in similar manner.

The display begins with the latest definition first. Perhaps you will have started a definition which did not get finished. Even though the function is not available because you perhaps made an error in defining it, you will see the word in the dictionary. This is a peculiarity of the system.

Eventually, you will want to learn the function of the words displayed with VLIST. But as you have seen, there are things you can do in FORTH with only a small selected portion of them. Also many of the words are system primitives which you will probably never need. MVP-FORTH is completely open and documented. You are free to change it any way you wish. But first you really should learn what is included and always make backup copies.

As you add words to the dictionary you are gradually filling up the dictionary and the space available in memory. It is best to have only those words in the dictionary which you will have occasion to use. The implementation of MVP-FORTH includes a number of common functions and serves as a basis for developing your own system. You might want to eliminate some of the words. Perhaps you will have no use for the ASSEMBLER. You can make the choice better after you have had some experience.

For now, each time you start the program, you will have to enter your favorite definitions again. At least at this stage that is the case. There are some things you will learn to do later. You will be able to write functions and save the source for your later use in FORTH screens. You will be able to load these screens without retyping them. Stil later, you will learn to save the current object code image as a new file. But for the present you will have to start over each time which is not big deal especially if you remember: KEEP IT SIMPLE!



Additional Number Classifications

by Kenneth J. Pietrucha - JACG

In a back issue of Recreational Computing, July-August, 1980, I found another number classificaton with which I was not familar, the NIVEN number. I have no idea how it got its name, but it is defined as a positive integer which is divisable by the sum of its digits. As an example, 24 is considered a NIVEN number because the sum of its individual digits is 2 + 4= 6 and 6 is a divisor of 24.

As long as we're summing digits, lets take a look at BALANCED numbers. A number is said to be balanced if the highest digit in the number is equal to half the sum of all the digits. Take the number 123, it is considered BALANCED because 1 + 2 + 3 = 6, half of 6 is 3, which is the largest digit in the number 123.

Last but not least, is a popular classification of numbers that I have often explored, called NARCISSISTIC numbers named after the Greek legend of NARRISSUS. This number classification is also refered to as the ARMSTRONG numbers. They are N digit numbers, where the sum of the N^{th} power of each digit is equal to number itself. The first three digit NARCISSISTIC number is 153. If we take $1^3 + 5^3 + 3^3$ we get 1 + 125 + 27 = 153, the original number.

Almost all the classifications of numbers require that the number to be tested, be broken down into its individual digits before it can be worked on. The following program illustrates a method for testing NARCISSISM.

```
1 REM ************************
2 REM *  NARCISSISTIC NUMBERS *
4 REM *  KENNETH PIETRUCHA    *
5 REM *       5/5/85          *
6 REM ************************
7 DIM STRING$(5)
8 DIM DIGIT(10)
9 SUM=0
10 PRINT "ENTER THE NUMBER TO BE TESTED"
20 INPUT NBR
30 STRING$=STR$(NBR)
40 LENGTH=LEN(STRING$)
50 FOR X=1 TO LENGTH
60 DIGIT(X)=VAL(STRING$(X,X))
70 CUBE=DIGIT(X)*DIGIT(X)*DIGIT(X)
80 SUM=SUM+CUBE
90 NEXT X
100 PRINT "THE SUM OF EACH DIGIT CUBED OF
THE NUMBER ";NBR;" = ";SUM
```

Analyzing the program: I begin by entering the number to be tested in line 20. The number is then converted into a string in line 30 so that I can operate on the individual digits. Using the LEN function in line 40, I can determine the number of characters (in this case digits) on which I have to work. Now I set up a loop and in line 60, I start working on one digit at a time. Working on the string, I change each position in the string back to its individual digits, one digit at a time, each time I go through the loop. In line 70, I take the digit that I recovered from the string and multiply it by itself three times to get the cube. The cube is then added to the previous total or sum. When I began, the sum was set equal to 0 in line 9. After a number of trips through the loop, which is determined by the number of digits in the string as defined by the length, the final answer of the sum of the cubes of the individual digits is printed. This same idea of breaking up the original number and working on the individual digits can be used on almost any number classifcation about which I have already written.

Computer Faire Volunteers

Standing in front of the Bell Labs auditorium are some of the stalworth volunteers who manned (personed?) the JACG booth at the recent Trenton Computer Faire. They are all proudly wearing their Team Atari t-shirts sent to us by the Tramiels. Our thanks to these JACGers for doing such good service for the cause. The good looking banner was created by Atari Safari leader Jerry Frese.

Membership Renewal

Take a moment and look at your mailing label on a recent issue of the JACG newsletter. Check the bottom right hand corner following "Last Issue:". This is the month/year when your membership expires. Try to renew at least one month early. This helps us keep our book keeping in order and avoids your missing any issues of the newsletter.

There are two easy ways to renew:

1. Fill out a membership renewal form in the front lobby before our monthly meeting and present it with $20 (in cash or check) to the Treasurer.

2. Copy the information on your mailing label and send, with $20, to:

Ron Kordos
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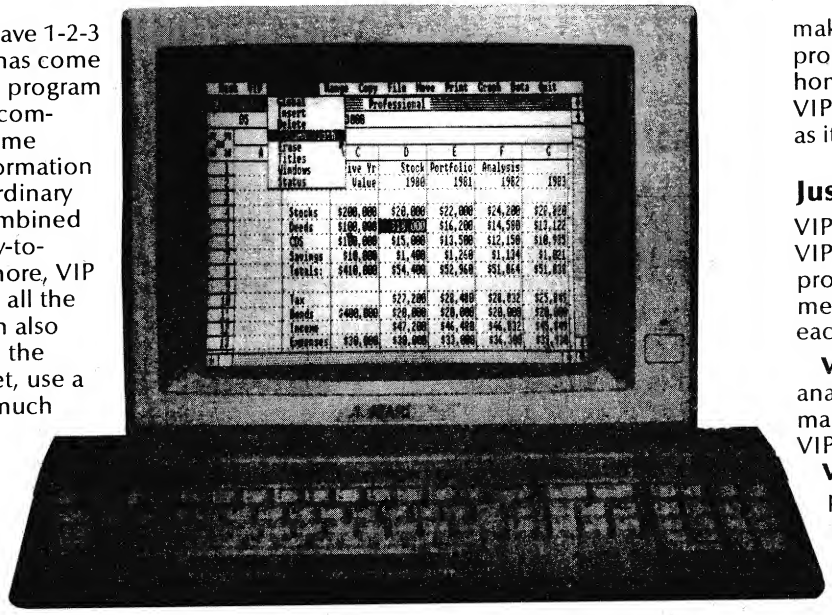

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123 Macros	Yes	Yes
123 Files	Yes	Yes
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Icons	Yes	No
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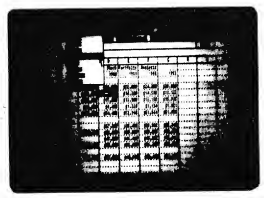

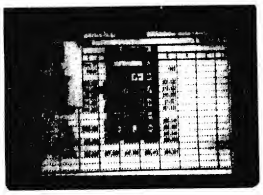

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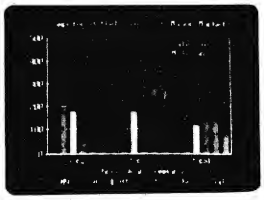

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MATCH WITS
CBS Software

Reviewed by
Joseph S. Kennedy - JACG

You won't win a trip for two to Florida or a color TV or a refrigerator. Hugh Downs isn't even going to shake your hand. But you will have fun and you'll probably get something even better than a prize and that's - smart - when you play "Match Wits" from CBS Software. "Match Wits" is the game of Concentration for the Atari. You must still match two items to view a part of the puzzle but now instead of prizes to match up you must match up facts. The disk comes with six preprogrammed categories - Sports, Words, Cities, Famous People, Multiplication and Animals. Of course you must then guess what the rebus hidden under the board is before you can win the game.

The best part of "Match Wits" is that you can put your own categories into the game. Math facts, foreign language pairs, important dates, just about anything you can think of that can be paired up. This is a good way to get the the kids to study. But don't tell them that they're studying- just let them think that they're having fun.

"Match Wits" does have some drawbacks. First, true to the nature of computer software, the documentation is totally wrong. In the booklet they discuss the use of a coordinate system to enter the guesses into the computer. However the instructions in the program itself (and this is a plus in that the proper instructions are on the disk) correctly point out that a joystick can be used or the number of the box can simply be entered. Come on, guys; surely something the size of CBS could at least find people who can use the computer and still write the documentation so that they'll know what they're writing about. Secondly, there is a long title sequence that you can do nothing about except read the next chapter in "War and Peace". But the biggest drawback to "Match Wits" is that you can not enter new rebuses. You're stuck with the ones that come with the game. You do get duplication of the rebus fairly often as the program selects the rebus at random and there just don't seem to be that many available.

However, with these complaints aside, "Match Wits" is a program that the kids enjoy and they do seem to learn from playing it. No minimum age is given but 11 or 12 would seem to be about the right age for the solving of the rebuses.

Wator, Wator Everywhere

The December issue of the Scientific American contains an article about the fictitious WATOR, a toroidal shaped planet covered by water and populated by fish and predatory sharks. Using this article as a reference JACGer Pat Madden wrote an article for the July issue of this newsletter which explores the concepts of the original paper. Pat also included a BASIC program which demonstrates the principles involved. His article has since spawned (punny) a series of responses on the subject. This issue contains an article on the same subject with a program in ACTION! by JACGer Charles Lichtenwalner. It runs considerably faster than the BASIC program so that the effects of chosen variables on the populations are more easily observed. The BASIC program has some advantages too. It allows you to watch as more subtle occurences take their toll. Whichever version you elect to run the experience is interesting from both mathematical and ecological points of view.

Pat Madden has been transfered to Baton Rouge, LA for a couple of years but would like to correspond with anyone interested in this topic or, for that matter, any topic related to mathematical games. His new address is:

Pat Madden
10793 Sandringham Avenue
Baton Rouge, LA 70815

Pat reports the following bugs and their corrections:

"I forgot to age the fish if they can't move because they are totally surrounded by other fish. Adding line 485 OCEAN(I,J) = OCEAN(I,J) + 1 corrects this. I did the same thing for the sharks, and then some! Line 915 should be replaced with:

```
915     STARV(I,J)=STARV(I,J)+1:OCEAN(I,J)=
OCEAN(I,J)-1:GOTO 840
```

Finally, to make the program stop when the ocean fills with fish, delete the GOTO 830 statement at the end of line 505 and add:

```
507 IF FISHNUM=700 THEN 1260
508 GOTO 830
```

Pat also mentions that the cursor is distracting and should be removed by POKE 752,1 early in the program. Finally, a group is being formed to collect various versions of WATOR (could this be computerdom's cult answer to Trekkies?) by Milt Boyd, Pinetree, P.O. Box 267, Amherst, NH 03031. Perhaps you are now inspired to investigate this interesting topic. We will entertain additional (ready?) schools of thought. Send it along for all to enjoy.

Sharks & Little Fish in ACTION!

by Charles P. Lichtenwalner - JACG

In the July JACG Newsletter, Patrick C. Madden,II described life on WATOR, listing a Basic program for running the simulation. I have been playing around with WATOR using the ACTION! language. The following listing shows one implementation.

This version adheres fairly closely to the scheme described by A. K. Dewdney in the Scientific American article. Five arrays are used to hold the fish and shark ages, whether or not they have been moved, and the number of chronons since the shark last ate. The function "ADJCELL" adjusts for the edges to provide wraparound at the beginning and end of the arrays. Orthogonal cells are picked by adding -40, -1, +1, or +40 to the cell under consideration. Since each line in Graphics 0 is 40 characters long, the -40 or +40 will move up or down. -1 And +1 examine the cells to the left and right of the considered cell. All of this is done through the array "NGHBRS". (Since ACTION did not appear to accept -40 and -1 in initializing arrays, I used 65536-40=65496 and 65536-1=65535.) The result of all this is a true torodial world for the fish and sharks to play around in.

Chronons take an average of 1 1/2 seconds calculation time with this program. (Up to 3 seconds when most of the cells are filled.)

As Mr. Madden implied, it appears difficult to get stable populations of fish and sharks. The populations of each swing wildly appearing to go through about 3 cycles of virtual extinction to overpopulation to virtual extinction every 100 chronons or so. I would like to point out however, that I can generally get several hundreds of chronons before ending up in solid fish or a dead world. The longest I have let it run was still going after 1000 chronons. I wonder if a non-torodial world, i.e. one without wraparound makes long term survival harder?

If you are interested in pursuing the WATOR world, the listing may be a base for pursuing some of the unanswered questions. I present it more as a utility than a final version. If you want to change any of the parameters get into the ACTION! editor and change the default values of the number of fish, sharks, number of chronons before fish and sharks can reproduce, and number of chronons before sharks will starve if they don't eat a fish.

```
;  WATOR   CPL 861485
BYTE SAVMSCL=88,SAVMSCH=89
BYTE ARRAY
DISPL(800),FISH(800),FISHMV(800),SHARK(800),SHARKMV(800),SHARKEAT(800)
INT ARRAY NGHBRS=[65496 65535 1 40],FMVLST(4),SEMVLST(4),SMVLST(4)
CARD SCREEN

INT NUMFISH=[100],FISHAGE=[3],NUMSHARK=[20],SHARKAGE=[5],SHARKSTARVE=[3]
;### change above values to set different starting parameters###

PROC INITGR() ;SET GRAPHICS 0
      GRAPHICS(0)
      SCREEN=SAVMSCL+256*SAVMSCH
RETURN

INT FUNC ADJCELL(INT CELL, NGHBR) ;ADJUST CELL FOR WRAPAROUND
      INT CPN
      CPN=CELL+NGHBR
      IF CPN<0 THEN RETURN (CPN+800)
            ELSEIF CPN>799 THEN RETURN (CPN-800)
            ELSE RETURN (CPN)
      FI

PROC LOADFISH()
      INT I,CELL
      SETBLOCK(FISH,800,255)
      FOR I=0 TO NUMFISH
      DO
            CELL=RAND(40)*40+RAND(40)
            FISH(CELL)=RAND(FISHAGE)
      OD
RETURN

PROC LOADSHARK()
INT I,CELL
SETBLOCK(SHARK,800,255)
SETBLOCK(SHARKEAT,800,0)
      FOR I=0 TO NUMSHARK
      DO
            CELL=RAND(40)*40+RAND(40)
            IF FISH(CELL)<>255 THEN I==-1
                  ELSE SHARK(CELL)=RAND(SHARKAGE)
                   SHARKEAT(CELL)=RAND(SHARKSTARVE)
            FI
      OD
RETURN

BYTE FUNC ATML(INT CELL) ;ADD TO FISH MOVE LIST
BYTE I,NUMV
INT ACN
NUMV=0
      FOR I=0 TO 3
      DO
           ACN=NGHBRS(I) : ACN=ADJCELL(CELL,ACN)
           IF FISH(ACN)=255 AND SHARK(ACN)=255 THEN
            FMVLST(NUMV)=ACN NUMV==+1
           FI

      OD
RETURN (NUMV)

BYTE FUNC ASEML(INT CELL)  ;ADD TO SHARKEAT MOVE LIST
BYTE I,NUMV
INT ACN
NUMV=0
      FOR I=0 TO 3
      DO
            ACN=NGHBRS(I) : ACN=ADJCELL(CELL,ACN)
            IF FISH(ACN)<>255 AND SHARK(ACN)=255 THEN SEMVLST(NUMV)=ACN
             NUMV==+1
            FI
      OD
RETURN(NUMV)

BYTE FUNC ASML(INT CELL)   ; FILL OUT SHARK MOVE LIST
BYTE I,NUMV
INT ACN
NUMV=0
      FOR I=0 TO 3
      DO
            ACN=NGHBRS(I) : ACN=ADJCELL(CELL,ACN)
            IF SHARK(ACN)=255 THEN
              SMVLST(NUMV)=ACN : NUMV==+1
            FI
      OD
RETURN(NUMV)
```

```
PROC DISPLY()
INT I
CARD FISHCNT,SHARKCNT
FISHCNT=0 : SHARKCNT=0
      FOR I=0 TO 799
      DO
            IF FISH(I)=255 AND SHARK(I)=255 THEN DISPL(I)=0
              ELSEIF SHARK(I)=255 THEN DISPL(I)=14 : FISHCNT==+1
              ELSE DISPL(I)=10 : SHARKCNT==+1
             FI
      OD
MOVEBLOCK(SCREEN,DISPL,800)
POSITION(0,23)
PRINT("                                  ")
POSITION(0,23)
PRINTF(" #FISH=%U",FISHCNT)
POSITION(20,23)
PRINTF("#SHARKS=%U",SHARKCNT)
;INPUTB()
RETURN

PROC MOVEFISH()
      INT I,MRN
      BYTE NUMV
      ZERO(FISHMV,800)
      FOR I=0 TO 799
      DO
      IF FISH(I)<>255 AND FISHMV(I)=0 THEN FISH(I)=(FISH(I)+1) MOD
FISHAGE
                  NUMV=ATNL(I)
           IF NUMV>0 THEN
                 MRN=FMVLST(RAND(NUMV)) ;PRINTF("MRN=%U%E",MRN)
                 FISH(MRN)=FISH(I) FISHMV(MRN)=1
                 IF FISH(I)=0 THEN
                       FISHMV(I)=1 ELSE FISH(I)=255
                 FI
           FI
           IF NUMV=0 THEN FISHMV(I)=1 FI
     FI
     OD
RETURN

PROC MOVESHARK()
INT I,MRN
BYTE NUMF,NUMS
ZERO(SHARKMV,800)
  FOR I=0 TO 799
  DO
    IF SHARK(I)<>255 AND SHARKMV(I)=0 THEN
     SHARK(I)=(SHARK(I)+1) MOD SHARKAGE : SHARKEAT(I)==+1
     NUMF=ASEML(I) : NUMS=ASML(I)
      IF SHARKEAT(I)>SHARKSTARVE THEN
       SHARK(I)=255 : SHARKEAT(I)=0
      ELSEIF NUMF>0 THEN MRN=SEMVLST(RAND(NUMF))
        SHARK(MRN)=SHARK(I) : SHARKEAT(MRN)=0 : SHARKMV(MRN)=1 :
FISH(MRN)=255
          IF SHARK(I)=0 THEN SHARKMV(I)=1 : SHARKEAT(I)=0 ELSE
SHARK(I)=255 : SHARKEAT(I)=0
         FI
      ELSEIF NUMS>0 THEN MRN=SMVLST(RAND(NUMS))
         SHARK(MRN)=SHARK(I) : SHARKEAT(MRN)=SHARKEAT(I) :SHARKMV(MRN)=1
          IF SHARK(I)=0 THEN SHARKMV(I)=1 : SHARKEAT(I)=0 ELSE
SHARK(I)=255 : SHARKEAT(I)=0
          FI
      ELSE SHARKMV(I)=1
      FI
     FI
  OD
RETURN

PROC MAIN()
      INT I
      INITGR()
      LOADFISH()
      LOADSHARK()
      DISPLY()
      FOR I=0 TO 10000
      DO
            MOVEFISH()
            MOVESHARK()
            POSITION(0,22)
            PRINTF("GENERATION #%U",I)
            DISPLY()
      OD
RETURN
```

EASTER EGG

from C.H.A.O.S.

Tips For Ghostbusters

If you want to get into Zuul fast, read on!

In order to get into Zuul you have to get more money than you started with. The best strategy is to get as few things as possible, and then start capturing the Marshmallow. Start out by buying the compact. Then get 1 trap and some bait, nothing else.

When you get out on the streets start busting like you normally would but don't forget that you only have one trap. When the P.K. energy gets to about 1000-1500 get near a building and put your finger near the "B" key. When the ghosts are just about to form the Marshmallow Man (when they are flying towards a building) hit the "B" key. This will give you $2000. Keep doing this until you get sucked into Zuul.

JULY MEETING HIGHLIGHTS

Reported by
Joseph S. Kennedy

During the question and answer period, questions as diverse as the difference between proportional spacing and proportional printing and ham radio with the Atari were answered with a little help from the whole group. (This column is proportionally spaced by the way.) After the Q&A period the meeting was opened with the officers' reports. Ron Kordos requested all members whose dues come due in August to pick-up a membership blank after the meeting and mail it to him or be prepared to stand in a long line next month as almost 200 are due to renew. Membership in the JACG is over 500 and growing.

Art reported that the ST's are now being shipped to dealers. He reviewed his article in the newsletter concerning Atari's "generous" users' groups purchase plan. His stance was approved by the membership. It was pointed out that anyone purchasing an ST should check carefully on the terms of the warranty.

Frank Pazel reported on a potential problem with DOS 2.5. It seems that if you rewrite a file which is past the old 707 sector level the rewrite starts at sector 1 - be careful. JACS in Cherry Hill is putting together graphics disks for use with Print Shop. If you have original graphics art for the Print Shop send them to Frank for submission to JACS. We will get copies of these disks which will then be available in the club library. Frank has a copy of a printer dump for the 1020 printer/plotter that allows the dumping of color graphics. As the newsletter editor Frank gets correspondence from many Atarians worldwide. He showed us some programs from Germany and France for the Atari. This was the foreign affairs portion of the program.

One of our younger members, Roger Mezzella, in view of the fact that this was the midsummer meeting demoed "Picnic Paranoia" for us. Roger was busy swatting ants, spiders and bees to keep them away from his picnic blanket. Thanks for a well done demo Roger.

Werner Hack gave us an excellent review of BASIC animation techniques as described in the book "Computer Animation Primer". Werner took us through simple string variables, redefined character sets and continous redefining of the character set. At a later meeting he will review machine language animation.

Kirk McDonald demostrated the difference in the architecture of the joystick ports between the 800 and the 800XL. This was unfortunate as Kirk was prepared to demonstrate his latest "wallpaper" program as written up in the July Newsletter, when he found that the Koala Pad does not respond the same way on the 800XL as it does on the 800. (This coincidentally was confirmed to me by Atari two days before when I questioned them on the use of paddles with the 130XE and the 800. Their reasoning for the change in the 800XL/130XE is that "the paddles were not very popular and most people did not buy them.")

Larry Chasen gave us an interesting look at the use of the Atari for lab research in DNA with programs he wrote to make the task easier and more efficient. Sort of using the Atari to search for your roots the hard way.

Jerry Frese tried to get volunteers for an under 18 years of age meeting but the idea died for lack of support.

The use of the Atari for the digitalizing of video images was demoed by Peter Hal and Paul Drabik showing us the effects of Computer Eyes. This is an interface to digitalize images from a video camera or VCR. Page 17 of the July Newsletter has more details on this. And yes Frank Pazel did make it on to the wide screen in the auditorium.

Finally, we should note that the fruits of "giving a bit" were gained by those who helped at the Trenton Computer Faire in the form of very nice T-shirts from Atari. Thanks to all those who most ably represented our group in Trenton.

GIVE A BIT!!

****

PEEKS and POKES

by Stephen J. Pietrucha - JACG

[The author of the regular column is on vacation. Filling in for his father is ten year old Stephen, who will share his favorite PEEK location with you.]

Hello ! My favorite Peek location is 53279. This location has a number which depends on the special function key that is pressed. If no key is pressed, the number in this location is 7, which is why I wrote line 15 of my program the way I did. If no key is pressed nothing is printed. Any other number gets printed.

If OPTION is pressed, it gives you a 3. If SELECT is pressed, it gives you a 5. START gives a 6. Try some other combinations of these keys.

The numbers change so fast that I had to put in line 18 to slow things down a bit.

This is the program listing:

```
2 REM PEEK(53279)
3 REM STEPHEN J. PIETRUCHA
4 REM 7-12-85
5 GRAPHICS 0
10 X=PEEK(53279)
15 IF X<>7 THEN PRINT X
18 FOR DELAY=1 TO 100:NEXT DELAY
20 GOTO 10
```

Happy computing! See you next vacation!

EVEN MORE ADVANCED ATARI MUSIC

by Matthew Tomlinson

I just read Mark Knutsen's article for the July JACG newsletter, and I must agree and disagree with some things he says. I am aware of the basic idea he is talking about in his article. The whole idea is that when you read in DATA for your music, you can read in much more than just four notes. With this data you can also read in length and volume of a set of notes.

He explained this pretty well, but I'll say it in my own words (and with my own ideas). When you read in A, B, C, and D as the variables for your four notes to be played, you can also read in other variables, such as LEN and VOL. LEN would be the length of the note. For most songs (although in a quick song this number would be less and in a slow song, the number would be larger), I find that 50 works well as the time amount for an eighth note. VOL, your volume, would be from 0 to 15. Be careful! If you have three or four notes playing at once, don't make your volumes add up to much more than around 28. Otherwise, you'll get an annoying vibrating sound while your music plays.

So this is how I would start a program:

```
10 FOR L=1 TO (the number of sets of four notes in your song):READ A,B,C,D,LEN,VOL:SOUND 0,A,10,VOL:SOUND 1,B,10,VOL:SOUND 2,C,10,VOL:SOUND 3,D,10,VOL
20 IF A=0 THEN 27
25 FOR W=1 TO LEN:NEXT W
27 NEXT L
```

From there, blocks of numbers in sixes would be typed in.

The reason I don't do this, though, is that after a while, typing in six numbers for each note can get boring and long. In the songs I do, I read in my four sets of notes (as explained in my previous JACG article), and the songs come out fine. As Mark Knutsen notes, triplets can be a problem. But nobody ever said that programming was problem-free.

In my May article, I promised to say how you can get a "drumbeat" in your song. You may try what I say and think that I'm up and over the high side. This is because in some songs, it's hard to add a beat in. If your song is too fast, it'll sound ridiculous. if your song is too slow, it'll also sound ridiculous, but for a different reason.

Anyway, the basic way to do it is to change your line that times each note to read:

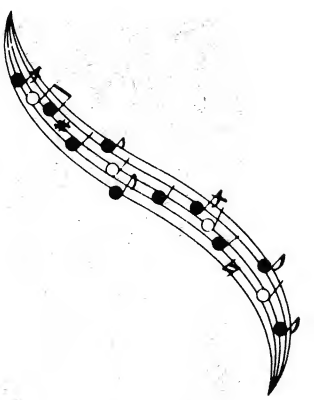
(Line #) SOUND 0,8,8,4:SOUND 1,217,8,12:FOR W=1 TO (length):NEXT W

Type in SOUND 0,8,8,4:SOUND 1,217,8,12 (RETURN)

Doesn't sound too pretty, does it? But when this is done quickly enough, but not too quickly, it can sound like a drum. But don't expect too much from it.

This month I offer you "Intermezzo", a very short song (well, I trimmed it down) that does, indeed, have a so-called "drumbeat". Try it. Hope you like it.

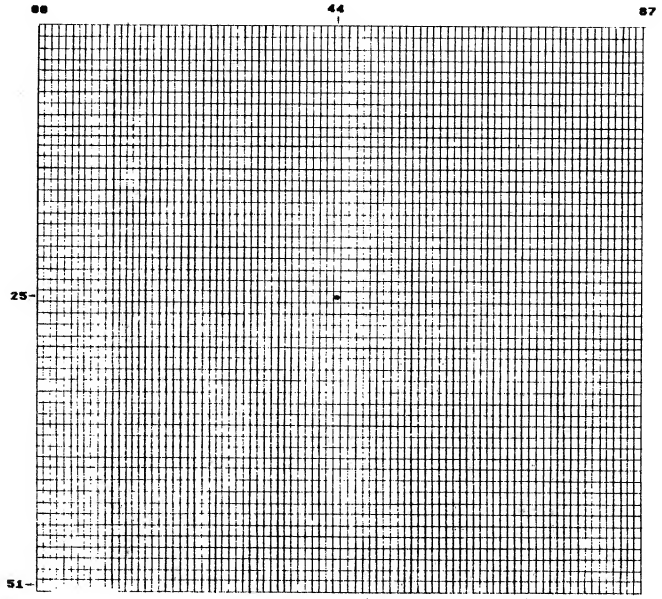
```
10 FOR L=1 TO 50:READ A,B,C,D:SOUND 0,A,10,3:
SOUND 1,B,10,3:SOUND 2,C,10,3:SOUND 3,D,10,3
20 FOR W=1 TO 40:NEXT W
22 IF A=0 THEN 27
25 IF VAR=0 THEN SOUND 0,121,8,15:VAR=1:GOTO 27
26 IF VAR=1 THEN SOUND 0,217,8,15:VAR=0
27 NEXT L
460 DATA 128,0,0,0,128,0,0,0
465 DATA 85,0,0,0
470 DATA 193,162,128,96
480 DATA 193,162,128,102
485 DATA 193,162,128,96
487 DATA 193,162,128,85
490 DATA 193,162,128,81
500 DATA 193,162,128,72
510 DATA 193,162,128,60
520 DATA 193,162,128,64
530 DATA 193,162,128,68
540 DATA 193,162,128,64
550 DATA 193,162,128,57
560 DATA 193,162,128,50
570 DATA 193,162,128,47
580 DATA 193,144,121,42
590 DATA 193,144,121,40
600 DATA 193,144,121,35
610 DATA 193,144,121,31
620 DATA 193,144,121,30
630 DATA 193,144,121,30
632 DATA 193,144,121,30
634 DATA 193,144,121,30
640 DATA 193,144,121,31
650 DATA 193,144,121,35
670 DATA 193,144,121,40
680 DATA 193,144,121,42
690 DATA 193,144,121,47
700 DATA 193,144,128,50
710 DATA 193,144,128,47
720 DATA 193,144,128,42
730 DATA 193,144,128,0
740 DATA 193,144,128,47
750 DATA 193,144,128,50
770 DATA 193,144,128,60
780 DATA 193,144,128,64
790 DATA 193,144,128,72
800 DATA 193,144,128,81
810 DATA 193,144,128,85
820 DATA 193,162,128,96
830 DATA 193,162,128,85
840 DATA 193,162,128,81
850 DATA 193,162,128,72
870 DATA 193,162,128,64
880 DATA 193,173,144,128
890 DATA 193,173,144,114
900 DATA 193,173,144,102
910 DATA 193,173,144,96
920 DATA 193,144,128,85
930 DATA 193,144,128,85
940 DATA 85,0,0,0
990 RESTORE 10:GOTO 10
```



THE DISK LIBRARY

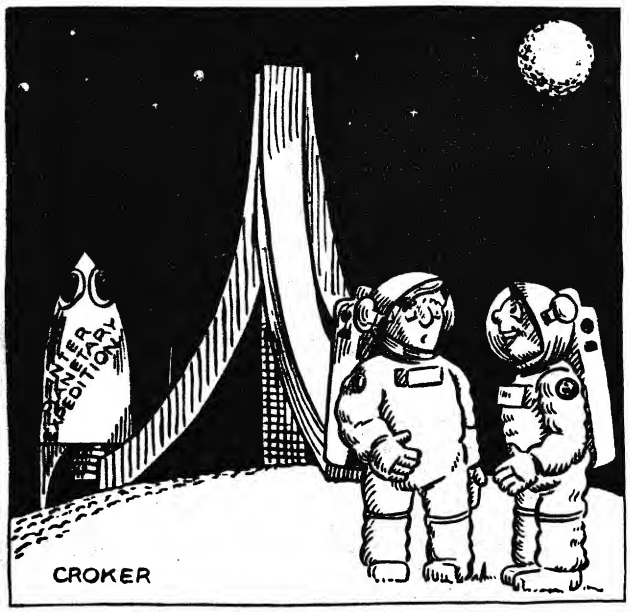
NEEDS YOUR CONTRIBUTION

Share Your Original Program With Us



The Print Shop Graph Paper

See Story Page 8



MAYBE IT'S SOME SORT OF IDOL THAT THE NATIVES WORSHIPED BACK DURING THE TWENTIETH CENTURY.

S.T.A.T.U.S. (Virginia)

Computer Magazine Article Index

by Wm. Brandt - JACG

There is a wealth of material on computers and programming, as well as a wide variety of programs and utilities available in computer magazines. However, if you have ever spent time looking for a special computer magazine article, or wanted to find magazine articles on a particular topic, you will appreciate the need for a computer magazine article index. Since the magazines themselves have not yet published this type of index, I have developed one and will make it available to any interested JACG members.

The index is set up as a database using SynFile+. Each record in the database represents information on a single magazine article. It contains the normal index information such as title, author, magazine, date, page number, etc., plus up to six lines of text to describe the contents of the article. At the present time the index contains over 2100 articles from the following magazines:

Magazines	Issues	Dates
ANALOG,	Issues 1-31,	Jan'81-Jun'85
ANTIC,	Vol.1,No.1-Vol.4,No.2,	Apr'82-Jun'85
COMPUTE,	Vol.4,No.1-Vol.7,No.6,	Jan'82-Jun'85

To help with the retrieval of information, each article has been classified by type of article, such as Graphics Utility, Educational Article, Modem Review, Word Processor, etc. There are over one hundred classifications which help to make finding articles on specific topics easier. Searches can also be done using the other fields, such as title, author, and date, as well as by combinations of these fields.

In order to allow for a larger number of articles to be included in the overall magazine index, a separate database has been set up for each magazine. This also reduces the search time for an article if the name of the magazine is already known. To do a search of the entire magazine index, separate searches for each of the magazines are combined into a special database file which is then sent to the screen or to a printer.

An example of a total search of all the magazines in the index is shown on the printout of articles for the category "Printer". The list of 49 articles includes the three printer categories (Printer Articles, Printer Reviews, and Printer Utilities). This example does not include information from any of the six lines of text that describe each article, and the printout of the title is limited to the first 30 characters.

The next steps will be to refine and expand the index. The goals for the end of the year are to:

(1) Add the July to December 1985 articles
(2) Expand the index to include articles from:
    (a) The Atari Connection
    (b) The Atari Explorer
    (c) COMPUTE (pre 1982 issues)
(3) Review and refine the categories of articles
(4) Produce a hardcopy version
(5) Make the index available to JACG members

TITLE	AUTHOR	MAGAZINE	VOLUME	NUMBER	ISSUE	DATE	PAGE	LANGUAGE
*** PRINTER ARTICLES ***								
A CABLE FOR YOUR PRINTER	ROBERT DEWITT	ANTIC	2	10		01/01/84	83	
ATARI AND EPSON	DOUGLAS MACKAY	ANTIC	2	10		01/01/84	65	BASIC
AVOIDING PRINTER PROBLEMS	J. BLAKE LAMBERT	COMPUTE	6	6	49	06/01/84	34	
CHOOSING THE RIGHT PRINTER	SELBY BATEMAN	COMPUTE	6	6	49	06/01/84	14	
DOING THE DIP-SWITCH DOODLE	ROBERT DEWITT	ANTIC	2	10		01/01/84	51	
DOT-MATRIX DIGITIZER	CHARLES JACKSON	ANTIC	3	12		04/01/85	40	BASIC
EPSON PRINTING MODES	THOMAS M. KRISCHAN	ANALOG		10		01/01/83	61	BASIC
FROM DOT MATRIX TO LASER PRINT	SELBY BATEMAN	COMPUTE	6	6	49	06/01/84	18	
HOW TO BUY THE RIGHT PRINTER	CHARLES BRANNON	COMPUTE	5	6	37	06/01/83	36	
HOW TO BUY THE RIGHT PRINTER	KATHY YAKAL	COMPUTE	7	6	61	06/01/85	30	
NEC FIX	JIM WOODING	ANTIC	2	4		07/01/83	86	
PRINTERS AND SPOOLERS	DAVID SMALL	ANTIC	3	1		04/01/84	91	
RUNNING NECK AND NEC	LARRY STEINER	ANTIC	2	10		01/01/84	43	
SELECTING YOUR PERFECT PRINTER	STEVE PANAK	ANALOG		21		08/01/84	21	
SOLVING COMMON PRINTER PROBLEM	SELBY BATEMAN	COMPUTE	7	6	61	06/01/85	36	
USING THE ATARI WORD PROCESSOR	THOMAS KREDO	COMPUTE	5	4	35	04/01/83	157	
*** PRINTER REVIEWS ***								
ANTIC 1985 PRINTER GUIDE	MICHAEL CIRAOLO	ANTIC	3	11		03/01/85	23	
ATARI 1020 COLOR PRINTER	DAVID DUBERMAN	ANTIC	3	5		09/01/84	47	
ATARI PRINTER REVIEW	STAFF	ANALOG		2		03/01/81	41	
EPSON FX-80	ARTHUR LEYENBERGER	ANTIC	2	4		07/01/83	117	
EPSON GRAFTRAX-80	CHARLES BRANNON	COMPUTE	4	12	31	12/01/82	183	
NEW COLOR PRINTERS	CHARLES JACKSON	ANTIC	3	11		03/01/85	30	
OKIMATE 10	CHARLES BACHAND	ANALOG		26		01/01/85	26	
OLYMPIA ES100 KRO	RICHARD MANSFIELD	COMPUTE	4	3	22	03/01/82	119	
PRINTER SURVEY	ROBERT DEWITT	ANTIC	2	10		01/01/84	53	
PRINTERS REVIEWED	JON LOVELESS	ANTIC	1	3		08/01/82	8	
THE ANALOG PRINTER SURVEY	MICHAEL DES CHENES	ANALOG		21		08/01/84	87	
THE ATARI 1020 COLOR PRINTER	TOM HUDSON	ANALOG		14		11/01/83	109	
THE NEW LOW-COST PRINTER/PLOT	TOM R. HALFHILL	COMPUTE	5	5	36	05/01/83	20	
THE NEW, LOW-COST PRINTERS	KATHY YAKAL	COMPUTE	5	6	37	06/01/83	44	
TWO MORE PRINTERS	JIM CAPPARELL	ANTIC	1	3		08/01/82	22	
*** PRINTER UTILITIES ***								
A BANNER BANNER PROGRAM	ANDREW LIEBERMAN	ANALOG		8		07/01/82	74	BASIC
A GRAPHICS PLOT FOR THE EPSON	WILLIAM L. OSBURN	COMPUTE	4	12	31	12/01/82	254	BASIC
ATARI PRINT FONT	JERRY WHITE	ANTIC	2	1		04/01/83	52	BASIC
BANNER MAKER	PAUL E. HOFFMAN	ANTIC	1	3		08/01/82	28	BASIC
BANNERTIZER	JOHN BAUMAN	ANTIC	3	8		12/01/84	90	BASIC
COPY ATARI GRAPHICS TO YOUR	HARRY A. STRAW	COMPUTE	4	6	25	06/01/82	62	BASIC
CUSTOM PRINT	MATTHEW RATCLIFF	ANTIC	3	11		03/01/85	21	BASIC
DISK LABEL PRINTER	RICHARD KUSHNER	ANTIC	2	10		01/01/84	58	BASIC
EPSET	DICK TEDESCHI	ANALOG		11		04/01/83	112	BASIC
FONT MAKER	JAMES DUFFIN	ANTIC	3	11		03/01/85	16	BASIC
KWIK DUMP	JERRY ALLEN	ANTIC	3	11		03/01/85	12	BASIC
LABEL MAKER	WILLIAM W. WATSON	ANTIC	3	11		03/01/85	19	BASIC
LIST ASSISTER	DANA NOONAN	ANTIC	2	4		07/01/83	93	BASIC
PROSET	RICHARD J. BROWNE	ANALOG		21		08/01/84	13	BASIC
ROTATING FONTS	SOL GUBER	ANTIC	2	10		01/01/84	48	BASIC
SCREEN DUMP	JERRY WHITE	ANTIC	2	10		01/01/84	73	BASIC
SCREEN PRINTER FOR THE ATARI	MICHAEL E. HEPNER	COMPUTE	5	5	36	05/01/83	192	BASIC
THE FERGEE FILE PRINTER	JOHN C. FERGUSON	ANALOG		21		08/01/84	95	BASIC

MEMO TO: President Ronnie Reagan

FROM : Donald Forbes, Commissioner

SUBJECT: China Friendship Month

DATE : 10 August 1985

The China Friendship Month committee is proud to present its recommendations for the celebration of this momentous event during mid-1986. Americans will have an unrivalled opportunity to develop a deeper understanding of the way of life of those people who account for one person out of five who live on this planet today.

The commission believes that it would be advantageous to introduce some Chinese customs during the 30-day period so as to give Americans a feeling for China's unique 6000-year culture. Here are its principal recommendations:

Taxis will not be metered. Taxis are not metered in China, but drivers are universally trustworthy and scrupulously honest. Customers will be handed tickets with the fare indicated in Chinese numerals. Tips should not be offered.

Because the Chinese consider knives to be barbaric instruments that should not be brought to the dining table, the use of chopsticks will be encouraged, not only as a gesture of friendship but as an incentive to moderation and to counteract wolfing. The use of chopsticks can be briefly explained as follows: You hold the upper stick between your thumb and first two fingers, while keeping the lower stick stationary with your third or third and fourth fingers; hold the sticks with one third above the hand and two thirds below. These instructions, incidentally, should be posted in all restaurants.

Beef-eating will be discouraged during Friendship Month. Beef was introduced into China by Westerners but remains an alien habit, which many Chinese find repugnant because they feel they are eating a domestic animal. The dense population has preempted the grazing land, so that cattle are used only as beasts of burden. Milk and cheese are virtually unknown, and have been supplanted by bean curd made from soybeans. Fast-food eateries in America will be requested to serve horsemeat instead.

Americans will be requested to leave their cars at home and refurbish the old bicycles in their garages for their daily trip to work and to the supermarket. New York City's Broadway crowded with thousands of bicycles will bring nostalgic memories to all former visitors to Peking and Shanghai.

Americans will be urged to follow Chinese custom and drink tea all day long. The history of tea-drinking in China goes back to the year 2737 B.C and the reign of Shen Nong. This emperor treated some of his ailments with herbal remedies. One of these was tea, which is now claimed to contain 300 chemical constituents, many of them of acknowledged medical value. In A. D. 730, in the Tang Dynasty, Lu Yu wrote a 'Book of Tea' in which he described the cultivation of the shrub and how to prepare an infusion from its leaves. The beverage was exported to Japan in the thirteenth century and was known in England by the seventeenth. Today as many as 250 varieties can be distinguished. Chinese tea, of course, is taken without sugar or milk. Since the Boston Tea Party, Americans became a nation of coffee drinkers and now look down on tea drinkers as slightly effeminate. This outdated prejudice should be discarded, or at least held in abeyance for a month.

For visiting Chinese, we should be prepared to reciprocate the attractions they offer to tourists. In place of a trip to the Great Wall, we can offer a tour of Wall Street (with a churchyard at one end and the East River at the other) even though the wall the Dutch built to keep out the Indians has long been dismantled. For a shopping expedition to the local Friendship Store we can offer a tour of the local K-Mart with extremely reasonable prices. Since the Chinese do not watch TV, we can offer table tennis and billiards in our hotels, and provide chess or Scrabble sets or decks of cards for them to while away their evening hours. These amenities will be provided in addition to the regular organized entertainment of acrobat shows, ballet and opera, concerts, the circus, and unforgettable American banquets.

To familiarize Chinese visitors with American customs and the language we recommend a Berlitz version of 'American for Chinese Speaking Travellers' that will include 1200 phrases and 2000 useful words with pronunciation shown throughout and a guide to travelling, eating out, shopping, bicycle rentals, acupuncture parlors, sightseeing and relaxing to sell at half price for $2.50.

The Chinese consider Western style dancing where couples of the opposite sexes hop around the floor arm-in-arm to be an unseemly display, from which they prefer to abstain. Americans will therefore be encouraged to refrain from dancing during Friendship Month or, if they must, to find partners of the same sex out of respect for Chinese sensibilities. In the same vein, there should be a ban on bikinis at all swimming pools and beaches.

Since the Chinese work ethic brands golf and tennis and horse racing as decadent, and baseball and football as timewasters, Americans will be encouraged to seek socially acceptable alternatives such as shadow-boxing, sabre dancing, tug-of-war games, swimming, gymnastics, table-tennis and badminton.

Mandarin Chinese is spoken by the majority of the people and is the official language of the country. The word 'mandarin' sounds elitist so that the phrase 'Peking dialect' or 'Bei-jing dialect' is used instead. There are nine groups of dialects, six of which are not mutually intelligible (including Cantonese and Hakka). Since most waiters in Chinese restaurants in America only understand Cantonese, Americans should

be dissuaded from practicing their Mandarin when ordering Peking duck. The written Chinese language is understood throughout China. Northern, southern and southwestern Mandarin speakers are able to communicate but the dialects differ greatly in pronunciation. Americans should be encouraged to speak their native dialects by exercising their Alabama drawl or Texas twang or Cajun French, and Brooklynites will be encouraged to commend all visiting young ladies on their perse and poisonality.

The Chinese language consists of about 800 monosyllables. The meaning of these monosyllables has been expanded in the Mandarin dialect to about 3200 words by pronouncing each monosyllable in one of four different tones (a high tone, a rising tone, a falling tone, or a falling-then-rising tone). The Cantonese have expanded the tones to seven. This limited vocabulary makes word meaning depend heavily on its context in the sentence. For lack of a precise language, the Chinese and other Orientals tend to plan their future actions on the consensus of a group rather than an autocratic order from a chosen leader. In a business context, Chinese executives consider it bad form to issue direct orders to their staff in the form of written memos (which is looked down upon as excessively precise and as the Western or 'American' way of doing business). American managers, therefore, will be urged for one month to dispense with memos and to conduct their corporate affairs (including future planning) by arriving at a consensus with all their subordinates.

The Chinese invented pure icons long before there was a Macintosh or a Jobs or a Wozniak. The Egyptian icons (which were displaced by the Greek alphabet) included phonic symbols which are missing from Chinese writing. The Japanese, for example, attach completely different sounds to the Chinese characters they use. The earliest Chinese writing was done with a hollow reed filled with ink, so that the sun could be represented as a circle with a dot in the middle. When they invented the brush, the circle degenerated into a rectangle with a line in the center. Writing became highly stylized. Each stroke in a character had to be drawn in the correct sequence. Calligraphy became a major art form like poetry in the West. We propose that secretaries for one month abandon their typewriters to practice penmanship and that executives prepare their reports in italic script. A blanket exemption, however, should be extended to the medical profession.

To cope with their population explosion, the Chinese are urging their families to limit themselves to one child per couple. As a sympathetic gesture to the Chinese, we suggest that social security numbers be withheld from all children born during Friendship Month to families with one or more children.

The high point of the commission's recommendations is that America celebrate publicly the Chinese lunar calendar holidays. The biggest Chinese festival of them all is the Spring Festival or Lunar New Year in late January or early February. The festival lasts four days and is a predominantly family celebration marked by good food and gift giving, and punctuated by lots of fireworks. At the beginning of April comes the Day of the Dead or 'sweeping of the graves' and a time to honor the ancestral dead. At the end of May is the time for the 'beginning of the sunny season' or Dragon Festival and the staging of 'dragon-boat' tournaments. Finally the Autumn Moon Festival at the autumnal equinox is a propitious time to conclude the Friendship Month celebrations with nationwide gatherings to eat moon-shaped cakes and look at the full moon.

Writing For The JACG Newsletter

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Articles should be submitted to the Editor by the 20th of the month for inclusion in the next issue. Submissions preferred on disk, using LJK Letter Perfect or Atari Writer. Font style should be Elite or Proportional with right hand justification. If hard copy is submitted the final printed width should be 4-1/4 inches from left margin to right margin. All formats will be considered including hand written documents if first arranged with the Editor.

We want to encourage everyone to voice his/her thoughts, knowledge, and opinions. Writing will be modified at the discretion of the Editor. No piece will be knowingly altered out of original intent.

****

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AMODEM 4.2 - MODIFIED

by Kenneth Pietrucha - JACG

One of the most popular public domain tele-communications programs is AMODEM 4.2. This program is free on almost every Atari Bulletin Board. I down loaded my copy from our own J.A.C.G. board. I am using this program with an MPP modem using a "R" handler program. The "R" handler tricks the computer into believing the 850 interface has been booted-up. It uses most of the Hayes Modem commands and will therefore run almost anything written for the Hayes or a compatable modem without modification.

The problem I had when I booted-up this program was that it "lifted the hook", or opened the phone line. I then had to either turn the modem off or quickly hang-up with the ATH command. I didn't want it to answer the phone right away, what I wanted was to boot-up the program and have it wait for my next command. A quick review of the program showed the trouble to be in line 10120. The offending line reads: X10 34, #MODEM, 192, ZERO, "R1". The number 192 is the command for the modem to answer the phone. I could have deleted this line, or put a REM statement right after the line number. Instead, I changed the 192 to 128, this in effect changed the command of the line from answer to hang-up. Now the modem will hang-up the line even if it is not open. I can boot the prgram and it will come-up and wait for my instructions. At this point, if your modem accepts Hayes compatable commands, you can tell it to dial with an ATD# command.

My ten year old son prefers AMODEM 4.2 to all the other programs I have let him try. Its simple menu makes it very effective.

I have added one other feature to this program. I can now hang-up the phone from the menu if it becomes necessary, without having to turn off the modem manually. I have used this feature a few times when the board on the other end locked-up and would not respond to any of my commands. It is very simple to add and it uses the command just discussed.

First I changed line 1010 to include the letter H, for hang-up. Then in line 6000, I added the word hang-up with the H in inverse video. I added a new line, 6052, which tells the program where to go if I choose the "H" option. When the "H" key is pressed, the program goes to line 14060, where it hangs-up the line and returns to the menu.

A total of six lines were either modified or added to the original program.

PROGRAM MODIFICATIONS

```
1010        PRINT          "SELECT          =
(ABORT,B,C,D,M,P,R,S,T,U,H)"
6000 PRINT  "BAUD, CAPTURE,  DUMP, MENU  OR
1-4,":
PRINT "DUPLEX, RECEIVE, SEND, HANG-UP":
PRINT " TRANSLATION, UPLOAD ?";
6052 IF C$="H" THEN 14060
10120 X10 34, #MODEM, 128, ZERO, "R1:"
14060 X10 34, #MODEM, 128, ZERO, "R1:"
14065 GOTO MENU
```

As I said before, my son uses this modem program and loves it. Most of his time is spent dropping in on bulletin boards. The capture feature on this program is perfect for what he wants to do and the error trapping is sufficient for even the most inexperienced user.

I have used AMODEM up to the revision 5.2. If anyone has anything higher, and is willing to share it, I would be appreciative.

I hope these modifications will help you enjoy your modem as much as we enjoy ours.

GIVE A BIT!!!

Contribute to the Newsletter this month.

J A C G
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